



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,935	11/30/2001	Zhiming Zhou	56196US011	5911

7590

07/30/2002

Office of Intellectual Property Counsel
3M Innovative Properties Company
PO Box 33427
St. Paul, MN 55133-3427

EXAMINER

RIBAR, TRAVIS B

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 07/30/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,935

Applicant(s)

ZHOU ET AL.

Examiner

Travis B Ribar

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 16-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-15, drawn to a pressure sensitive adhesive and an adhesive article made from it, classified in class 428, subclass 343.
 - II. Claims 16-33, drawn to a method of using the pressure sensitive adhesive, classified in class 118, subclass 505.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different process, such as using the product (the adhesive and the adhesive article) as a tape to attach two objects to each other.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Ms. Colene Blank on July 16, 2002 a provisional election was made with traverse to prosecute the invention of the pressure

Art Unit: 1711

sensitive adhesive and the article using the pressure sensitive adhesive, group I, claims 1-15. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-33 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Oath/Declaration

6. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

There is no oath present in this application.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-9 and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Everaerts et al.

Everaerts et al. discloses a pressure sensitive adhesive article comprising a pressure sensitive adhesive (PSA) made from an acrylate ester, a carboxylic acid functional monomer, and a crosslinking agent. The acrylate ester (column 4, lines 16-25 and lines 48-63) is the same acrylate ester that the applicant claims in claims 1, 8, 9, 14, and 15. The carboxylic acid functional monomer (column 4, lines 64-65) is the same as the carboxylic acid functional monomer in claims 1, 7, and 15. The crosslinking agent (column 5, lines 6-63) is also the same as the applicant's (claims 1 and 15).

The applicant claims a pressure sensitive adhesive that has a specific ratio of carboxylic acid functional monomers to crosslinking agents. The amount of carboxylic acid functional monomers (column 6, lines 60-62 and the examples) in Everaerts et al. is the same as those in claims 11-13. In addition, the amount of crosslinking agent in Everaerts et al. (column 6, lines 63-65 and examples) is also the same as the amount of crosslinking agent that the applicant shows is useful (in their examples). Since the amount of each component in Everaerts et al. is the same as the amount of each component in the present application, the molar ratios of the two components are also the same. Everaerts et al. thereby meets that part of claims 1, 4-6, and 15.

The heat exposure properties of the adhesive, appearing in claims 2 and 3 of the present invention, are properties inherent to a given material. As such, any material that fulfills the applicant's material claims fits these property claims as well. Everaerts et

al. meets the material claims set forth by the applicant, as shown above, specifically, Everaerts et al. discloses the same composition as the applicant used for the same purpose (a PSA). Therefore even though Everaerts et al. does not refer to the heat resistance properties of its invention, it still anticipates claims 2 and 3.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al. in view of Peloquin et al.

Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. Peloquin et al., disclosed in the applicant's 1449 form (WO 97/31076), discloses that the crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the two is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent in Peloquin et al. in the PSA in Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the

Art Unit: 1711

crosslinking agent in Peloquin et al. is broadly encompassed by Everaerts et al.

Therefore it would have been obvious to combine Peloquin et al. with Everaerts et al. to obtain the invention as specified in claim 10.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Everaerts et al. in view of the abstracts of both JP-02178379A and JP-03281585A.

Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. The abstracts of both JP-02178379A and JP-03281585A disclose that the crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the two is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent taught by the abstracts of both JP-02178379A and JP-03281585A in the PSA in Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the crosslinking agent in the abstracts of both JP-02178379A and JP-03281585A is broadly encompassed by Everaerts et al. Therefore it would have been obvious to combine the teachings of the abstracts of both JP-02178379A and JP-03281585A with Everaerts et al. to obtain the invention as specified in claim 10.

12. Claims 1-9 and 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yau et al. in view of Everaerts et al.

Yau et al. discloses a high temperature resistant PSA tape made from an acrylate ester, a carboxylic acid functional monomer, and a crosslinking agent. The acrylate ester (column 5, lines 51-67) is the same acrylate ester in claims 1, 8-9, and 14-15, and the carboxylic acid functional monomer (column 6, lines 19-20) is the same as the monomer in claims 1, 7, and 15.

The applicant claims a pressure sensitive adhesive that has a specific ratio of carboxylic acid functional monomers to crosslinking agents. The amount of carboxylic acid functional monomers (see example 1) in Yau et al. is the same as those in claims 11-13. In addition, the amount of crosslinking agent in Yau et al. (column 8, lines 21-23) is also the same as the amount of crosslinking agent that the applicant shows is useful (in their examples). Since the amount of each component in Yau et al. is the same as the amount of each component in the present application, the molar ratios of the two components are also the same. Yau et al. thereby meets that part of claims 1, 4-6, and 15.

Yau et al. does not, however, teach the use of the exact crosslinker that the applicant claims in claims 1 and 15. That aspect of the invention is in Everaerts et al., which is discussed above and teaches that the claimed crosslinker is a good crosslinking agent to use in an acrylate-based PSA.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent in Everaerts et al. in the PSA in Yau et al.

The motivation for doing so would be that the crosslinking agent is known to be a good crosslinking agent for the composition in Yau et al. and that the substitution of one crosslinking agent for another is not outside the invention envisioned in Yau et al. Therefore it would have been obvious to combine Everaerts et al. with Yau et al. to obtain the invention as specified in claims 1-9 and 11-15.

The heat exposure properties of the adhesive, appearing in claims 2 and 3 of the present invention, are properties inherent to a given material. As such, any material that fulfills the applicant's material claims fits these property claims as well. Yau et al. in view of Everaerts et al. meets the material claims set forth by the applicant, as shown above, specifically, the combination of Yau et al. and Everaerts et al. discloses the same composition as the applicant used for the same purpose (a PSA). Therefore even though the combination of Yau et al. and Everaerts et al. does not refer to the heat resistance properties of its invention, it still anticipates claims 2 and 3, especially since Yau et al. reveals the resistance of the PSA to high temperatures (column 11, lines 25-47).

13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yau et al. in view of Everaerts et al. as applied to claim 1 above, and further in view of Peloquin et al.

The combination of Yau et al. and Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. Peloquin et al., disclosed in the applicant's 1449 form (WO 97/31076), discloses that the

crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the references is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent in Peloquin et al. in the PSA taught by the combination of Yau et al. and Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the crosslinking agent in Peloquin et al. is broadly encompassed by Everaerts et al. Therefore it would have been obvious to combine Peloquin et al. with Everaerts et al. and Yau et al. to obtain the invention as specified in claim 10.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yau et al. in view of Everaerts et al. as applied to claim 1 above, and further in view of the abstracts of both JP-02178379A and JP-03281585A.

The combination of Yau et al. and Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. The abstracts of both JP-02178379A and JP-03281585A disclose that the crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the references is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent taught by the abstracts of both JP-

02178379A and JP-03281585A in the PSA taught by the combination of Yau et al. and Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the crosslinking agent in the abstracts of both JP-02178379A and JP-03281585A is broadly encompassed by Everaerts et al. Therefore it would have been obvious to combine the teachings of the abstracts of both JP-02178379A and JP-03281585A with Yau et al. and Everaerts et al. to obtain the invention as specified in claim 10.

15. Claims 1-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oji et al. in view of Everaerts et al.

Oji et al. discloses an acrylate-based pressure sensitive adhesive sheet noted for its good adhesion to glass (applicant's claim 3) and its high temperature resistance (column 2, line 61). The PSA is made from an acrylate ester meeting claims 1, 8-9 and 14-15 (column 5, lines 27-32), a carboxylic acid functional monomer meeting claims 1, 7, and 15 (column 5, lines 65-66), and an aziridine crosslinker (column 6, lines 44-45).

The applicant claims a pressure sensitive adhesive that has a specific ratio of carboxylic acid functional monomers to crosslinking agents. The amount of carboxylic acid functional monomers (column 6, lines 3-4) in Oji et al. is the same as those in claims 11-13. In addition, the amount of crosslinking agent in Oji et al. (column 6, lines 40-42) is also the same as the amount of crosslinking agent that the applicant shows is useful (in their examples). Since the amount of each component in Oji et al. is the same as the amount of each component in the present application, the molar ratios of the two

Art Unit: 1711

components are also the same. Oji et al. thereby meets that part of claims 1, 4-6, and 15.

Oji et al. does not include the exact structure of the aziridine crosslinking agent that the applicant claims. That structure is found in Everaerts et al., which teaches that the claimed crosslinking agent is a good crosslinking agent to use in an acrylate-based PSA.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent in Everaerts et al. in the PSA in Oji et al. The motivation for doing so would be that aziridines are broadly envisioned in Oji et al. and the aziridine in claims 1 and 15 is known to be a crosslinking agent useful in acrylate-based PSA compositions, such as the one in Oji et al. Therefore it would have been obvious to combine Everaerts et al. with Oji et al. to obtain the invention as specified in claims 1-9 and 11-15.

The heat exposure properties of the adhesive, appearing in claims 2 and 3 of the present invention, are properties inherent to a given material. As such, any material that fulfills the applicant's material claims fits these property claims as well. Oji et al. in view of Everaerts et al. meets the material claims set forth by the applicant, as shown above, specifically, the combination of Oji et al. and Everaerts et al. discloses the same composition as the applicant used for the same purpose (a PSA). Therefore even though the combination of Oji et al. and Everaerts et al. does not refer to the heat resistance properties of its invention, it still anticipates claims 2 and 3, especially since Oji et al. reveals the resistance of the PSA to high temperatures (column 2, line 61).

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oji et al. in view of Everaerts et al. as applied to claim 1 above, and further in view of Peloquin et al.

The combination of Oji et al. and Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. Peloquin et al., disclosed in the applicant's 1449 form (WO 97/31076), discloses that the crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the references is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent in Peloquin et al. in the PSA taught by the combination of Oji et al. and Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the crosslinking agent in Peloquin et al. is broadly encompassed by both Oji et al. and Everaerts et al. Therefore it would have been obvious to combine Peloquin et al. with Everaerts et al. and Oji et al. to obtain the invention as specified in claim 10.

17. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oji et al. in view of Everaerts et al. as applied to claim 1 above, and further in view of the abstracts of both JP-02178379A and JP-03281585A.

The combination of Oji et al. and Everaerts et al. discloses the invention in claim 1 (discussed above), but does not include the exact crosslinking agent of claim 10. The abstracts of both JP-02178379A and JP-03281585A disclose that the crosslinking agent in claim 10 is used to crosslink acrylic-based PSA's. Since the structure of the crosslinking agent in claim 10 is so close to the structure disclosed by Everaerts et al., the compatibility of the references is not an issue.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the crosslinking agent taught by the abstracts of both JP-02178379A and JP-03281585A in the PSA taught by the combination of Oji et al. and Everaerts et al. The motivation for doing so would be that the crosslinking agent is known to effectively crosslink an acrylic-based PSA and further that the structure of the crosslinking agent in the abstracts of both JP-02178379A and JP-03281585A is broadly encompassed by both Oji et al. and Everaerts et al. Therefore it would have been obvious to combine the teachings of the abstracts of both JP-02178379A and JP-03281585A with Oji et al. and Everaerts et al. to obtain the invention as specified in claim 10.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis B Ribar whose telephone number is (703) 305-3140. The examiner can normally be reached on 8:30-5:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone

Art Unit: 1711

numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Travis B Ribar
Examiner
Art Unit 1711

TBR
July 19, 2002

*James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700*